

ACHROPHYLLUM¹

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Achrophyllum Vitt & Crosby, *Bryologist* 75: 174 (1975); from the Greek *achrostos* (colourless) and *phyllon* (a leaf), in reference to the almost hyaline leaves of the type species.

Type: *A. quadrifaria* (Sm.) Vitt & Crosby

Dioicous. Plants slender to robust, medium-sized. Stems fleshy, elongate, simple or with a few branches. Leaves complanate, often most dense near the stem apex; upper and lower leaves smaller, spreading laterally, asymmetrical, broadly ovate, variably toothed above; base spatulate; border absent; costa strong, extending to mid-leaf, forked above. Laminal cells comparatively large, smooth, rounded-hexagonal.

Calyptra mitrate, short, smooth; base fringed. Seta long. Capsules usually oval, cernous or pendulous; operculum rostrate, beaked. Peristome teeth widely furrowed on the median line; basal membrane high, with broad processes; cilia lacking or rudimentary.

Achrophyllum occurs in the South Pacific and South Atlantic regions and on Subantarctic islands. Most of the approximately eight species are endemic to southern South America, with one widespread species in Australia.

References

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Vitt, D.H. & Crosby, M.R. (1975), *Achrophyllum* – a new name for a genus of mosses, *Bryologist* 75: 174–175.

Achrophyllum dentatum (Hook.f. & Wilson) Vitt & Crosby, *Bryologist* 75: 175 (1975)

Hookeria dentata Hook.f. & Wilson, *London J. Bot.* 3: 550 (1844); *Pterygophyllum dentatum* (Hook.f. & Wilson) Dixon, *J. Linn. Soc., Bot.* 40: 455 (1912). T: “Lord Auckland’s Island, 88b”; lecto: BM, *vide* H.Streimann, *J. Hattori Bot. Lab.* 82: 285 (1997); isolecto: BM.

Hookeria hepaticaeifolia Müll.Hal. & Hampe, *Linnaea* 26: 503 (1853); *Pterygophyllum hepaticaeifolia* (Müll.Hal. & Hampe) A.Jaeger, *Ber. Thätigk. St. Gallischen Naturwiss. Ges.* 1875–76: 343 (1877) [Ad. 2: 247]. T: “Sealers Cove et steep bank river”, [Vic.], *F.Mueller*; lecto: BM, *vide* H.Streimann, *loc. cit.*

Hookeria nigella Hook.f. & Wilson, in J.D.Hooker, *Fl. Nov.-Zel.* 2: 124 (1854); *Pterygophyllum nigellum* (Hook.f. & Wilson) Mitt., *Hooker’s J. Bot. Kew Gard. Misc.* 8: 264 (1856). T: *s. loc.*, New Zealand, *W.Colenso H 3674*; lecto: BM, *vide* H.Streimann, *loc. cit.*; isolecto: BM.

Pterygophyllum obscurum Mitt., *J. Linn. Soc., Bot.* 4: 96 (1859). T: Cheshunt, Tas., *W.Archer*; holo: NY *n.v.*; iso: BM.

Pterygophyllum denticulatum Mitt., *J. Linn. Soc., Bot.* 12: 397 (1869), *nom. illeg., incl. spec. prior.*

Pterygophyllum hookeri A.Jaeger, *Ber. Thätigk. St. Gallischen Naturwiss. Ges.* 1875–76: 343 (1877) [Ad. 2: 247], *nom. illeg., incl. spec. prior.*

Pterygophyllum watsii Broth., *Öfvers. Förh. Finska Vetensk.-Soc.* 42: 108 (1900); *Achrophyllum watsii* (Broth.) H.P.Ramsay, *Telopea* 2: 490 (1984), *nom. inval.* T: Wilsons Ck, N.S.W., *W.W.Watts 2152*; holo: H; iso: BM, NSW.

¹ Now included in the family Daltoniaceae [Goffinet, B., Buck, W.R. & Shaw, A.J. (2012), *Classification of the Bryophyta*. <http://www.eeb.uconn.edu/people/goffinet/Classificationmosses.html>].

Cite as: H.Streimann, *Australian Mosses Online. 11. Hookeriaceae: Achrophyllum*. http://www.anbg.gov.au/abrs/Mosses_Online/Achrophyllum.pdf (2012)

Hepaticina pseudoobscura Müll.Hal., *Hedwigia* 41: 125 (1902), *nom. inval.*

Hepaticina interstitialis Müll.Hal., *Hedwigia* 41: 127 (1902), *nom. inval.* T: Pyer's [Tyers] River, Vic., 1881, *H.Tysdale*; *n.v.*

Pterygophyllum bryoides Broth., in H.G.A.Engler & K.A.E.Prantl, *Nat. Pflanzenfam.* I, 3: 932 (1907); *Hepaticina bryoides* Müll.Hal., *Hedwigia* 41: 124 (1902), *nom. inval.* T: Wimmera, Vic., 1892, *J.P.Eckert*; *holo: H.*

Pterygophyllum cyclophyllum Broth., in H.G.A.Engler & K.A.E.Prantl, *Nat. Pflanzenfam.* I, 3: 932 (1907); *Hepaticina cyclophylla* Müll.Hal., *Hedwigia* 41: 124 (1902), *nom. inval.* T: Wellington, New Zealand, *T.Kirk*; *holo: BM.*

Pterygophyllum flaccidissimum Broth., in H.G.A.Engler & K.A.E.Prantl, *Nat. Pflanzenfam.* I, 3: 932 (1907); *Hepaticina flaccidissima* Müll.Hal., *Hedwigia* 41: 127 (1902), *nom. inval.* T: *s. loc.*, Tas., *A.F.Oldfield*; *n.v.*

Pterygophyllum trichoides Geh., *Proc. Linn. Soc. New South Wales* 60: 93 (1935), *nom. nud.*

Illustrations: J.Beever, K.W.Allison & J.Child, *Mosses of New Zealand*, 2nd edn 132 (1992); H.Streimann, *op. cit.* 284; R.D.Seppelt, *The Moss Flora of Macquarie Island* 173, fig. 69 (2004).

Stems creeping, rarely suberect, 0.5–5.0 cm long; branches few, short; rhizoids on lower stems, smooth, moderately dense, light red. Leaves matted, crisped and dull green to blackish when dry, ±straight and green to dark green when moist, fleshy, opaque, widely spaced along the stem, but usually crowded at the apices. Lateral leaves asymmetrical at the base, oblong-ovate to spatulate, 2.3–4.4 mm long, 1.00–1.95 mm wide. Dorsal and ventral leaves symmetrical, oval, (1.6–) 2.0–2.8 mm long, (1.0–) 1.4–1.9 mm wide; apex round or obtuse; margin plane, variously coarse-toothed to erose-denticulate (often several cells); costa usually firm, variable, extending c. 50–75% of the leaf length, short-forked near mid-leaf, 120–180 µm wide at the base. Laminal cells thin-walled, with thickened corners; upper cells hexagonal, 30–50 × 25–40 µm; median cells round-hexagonal, 30–60 × 30–50 µm, smaller towards the margins; basal cells elongate-hexagonal to rectangular, 100–120 × 40–50 µm, smaller towards the margins.

Perigonia axillary on new growth, ovate, c. 1 mm long. Perigonal leaves elliptical, acuminate, ecostate; margin entire; laminal cells hexagonal, upper cells c. 30 × 20 µm, median cells slightly larger, basal cells c. 70 × 20 µm, slightly narrower and longer along the margin. Antheridia c. 10 per perigonium, 600–700 × 140–160 µm; paraphyses clear, c. 640 × 30 µm; cells 120–200 µm long. Perichaetia lateral on branches; perichaetial leaves at the base of setae delicate, lanceolate to oblong-lanceolate, 1.6–2.1 mm long, 0.7–1.0 mm wide, acuminate, ecostate; base straight; margin entire to weakly denticulate; laminal cells clear, hexagonal, upper cells variable, 50–100 × 10–16 µm, median cells slightly larger, basal cells to 130 × 24 µm. Calyptra apex black; base hyaline, shallowly lobed. Seta 12–20 (–25) mm long, dark red to purple. Capsules dark brown to black, oblong to ovoid, 1–2 mm long; operculum almost as long as the capsule; beak erect. Exostome teeth yellow, joined at the base, lanceolate-subulate, c. 560 µm long, c. 120 µm wide at the base; apex filiform, transversely striolate; dorsal lamellae projecting; ventral lamellae well developed; endostome segments as long as the teeth, hyaline, faintly papillose; basal membrane c. half the height of the teeth; cilia rudimentary. Spores 10–18 µm diam.

Occurs in S.A., Qld, N.S.W., A.C.T., Vic. and Tas.; observed in most vegetation types, including tropical rainforest to grassland to subalpine shrubland; prefers shaded moist habitats, often near or in running water; often on rocks, logs, rotting tree fern trunks and on soil. Also on Lord Howe Island, Macquarie Island, New Zealand, New Guinea, Chile, Argentina and the Falkland Islands.

S.A.: Mount Lofty Botanic Garden, *G.H.Bell* 825 (AD, CANB). Qld: Kroombit S.F., 53 km E of Biloela, *H.Streimann* 52473 (CANB, MO, NY). N.S.W.: Blue L., 7.5 km NE of Mt Kosciuszko, *H.Streimann* 47104 (CANB). A.C.T.: Little Ginini, Brindabella Ra., *H.Streimann* 4231 (CANB, L, NICH). Vic.: Toorongo R., Toorongo S.F., 7 km NE of Noojee, *H.Streimann* 50849 (*Musci Austral. Exs.* 229) (CANB). Tas.: Strzelecky Peak, Flinders Is., *J.H.Willis s.n.* (MEL 1046521).